In the Claims

1. - 10. (Canceled)

11. (Previously Presented) A method for preparing circularized recombinant nucleic acids from a vector and an insert comprising the steps of:

producing circularized recombinant nucleic acid by ligating a DNA insert and a DNA vector in the presence of a DNA compaction agent selected from the group consisting of histone proteins, histone protein derivatives, viral envelope proteins, phage envelope proteins, bacterial chromoid proteins, non-histone chromosomal proteins, HMGs, derivatives of said proteins, and mixtures of said proteins and protein derivatives; and

selecting said circularized recombinant nucleic acid

wherein said DNA compaction agent is present at a concentration sufficient to allow the DNA insert to remain flexible and wherein said circularized recombinant nucleic acid is greater than 5kb.

12. (Previously Presented) The method according to Claim 11, wherein the size of said circularized recombinant nucleic acid is greater than 10 kb.

13. (Previously Presented) The method according to Claim 11, wherein said selection comprises the steps of:

transferring said circularized recombinant nucleic acid into a cellular medium suitable for cloning;

cloning said circularized recombinant nucleic acid; and

testing for presence of said insert in said circularized recombinant nucleic acid.

14. (Previously Presented) The method according to Claim 11, wherein said DNA compaction agent is one selected from the group consisting of a protein, a mixture of proteins, and protein derivatives exhibiting the properties of said DNA compaction agent.

15. (Canceled)

16. (Previously Presented) The method according to Claim 11, wherein said ligation comprises the step of adding a ligase to a ligation medium comprising DNA in solution in ligation buffer.

17. (Previously Presented) The method according to Claim 16, wherein said DNA compaction agent is added to said ligation medium prior to the addition of said ligase.

18. (Previously Presented) The method according to Claim 16, wherein said DNA compaction agent is added to said ligation medium simultaneously with the addition of said ligase.

19. (Canceled)

20. (Previously Presented) The method according to Claim 11, wherein said DNA compaction agent has a concentration (C) that is defined by the following equation:

$(C) = 10^{-X}$ mg DNA compaction agent/ng total DNA/bp recombinant,

wherein X = 8-15.

21. (Previously Presented) The method according to Claim 11, wherein said DNA compaction agent has a concentration (C) that is defined by the following equation:

$(C) = (10^{-X}$ mg DNA compaction agent/ng total DNA/bp recombinant) $\cdot$ Y

wherein X = 8-15 and

Y = 0.2 - 10.

22. (Previously Presented) The method according to Claim 16, wherein said ligation medium further comprises a stabilizing agent, wherein said stabilizing agent is capable of preventing denaturation, aggregation, and absorption of said DNA compaction agent.

23. (Previously Presented) The method according to Claim 11, wherein said histone proteins are selected from the group consisting of histone H1, H2A, H2B, H3, and H4.

24. - 27. (Canceled)

28. (Previously Presented) A method for preparing circularized recombinant nucleic acids from a vector and an insert comprising the steps of:

producing circularized recombinant nucleic acid by ligating a DNA insert and a DNA vector in the presence of a DNA compaction agent selected from the group consisting of histone proteins, histone protein derivatives, viral envelope proteins, phage envelope proteins, bacterial chromoid proteins, non-histone chromosomal proteins, HMGs, derivatives of said proteins, and mixtures of said proteins and protein derivatives; and

selecting said circularized recombinant nucleic acid,

wherein said DNA compaction agent is present at a concentration sufficient to allow the DNA insert to remain flexible.